



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/788,519	02/27/2004	James Daren Bledsoc	10031155-1	6922
7590		10/24/2007	EXAMINER	
AGILENT TECHNOLOGIES, INC.			NGUYEN, ALLEN H	
Legal Department, DL 429			ART UNIT	PAPER NUMBER
Intellectual Property Administration			2625	
P.O. Box 7599				
Loveland, CO 80537-0599				
		MAIL DATE	DELIVERY MODE	
		10/24/2007	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	10/788,519	BLEDSOE ET AL.
	<b>Examiner</b>	<b>Art Unit</b>
	Allen H. Nguyen	2625

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 27 February 2004.  
 2a) This action is FINAL.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-25 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1-25 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on 27 February 2004 is/are: a) accepted or b) objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
     1. Certified copies of the priority documents have been received.  
     2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
     3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date: _____
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)	5) <input type="checkbox"/> Notice of Informal Patent Application
Paper No(s)/Mail Date <u>10/24/2006</u>	6) <input type="checkbox"/> Other: _____

**DETAILED ACTION**

***Information Disclosure Statement***

1. The information disclosure statement (IDS) submitted on 10/24/2006 has been considered by the examiner.

***Specification***

2. The disclosure is objected to because of the following informalities:

In Specification, page 5, line 15,

" components 122" should be changed to -- components 124--.

In Specification, page 5, line 18,

" user interface 124" should be changed to -- user interface 122--.

In Specification, page 5, line 20,

"user interface 124" should be changed to -- user interface 122--.

In Specification, page 5, line 24,

" components 122" should be changed to -- components 124--.

In Specification, page 6, line 3,

"user interface 124" should be changed to -- user interface 122--.

Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-12, 18-25 are rejected under 35 U.S.C. 102(e) as being anticipated by Sugita (US 2004/0068548).

Regarding claim 1, Sugita '548 discloses a peripheral device (a control unit 1, fig. 2), comprising:

peripheral circuitry (a main controller 11/ an engine controller 12, fig. 2) operable to perform a desired function responsive to control signals (i.e., for controlling so that an image which corresponds to a signal fed from the main controller is formed in accordance with the signal; see page 2, paragraph [0018]);

a programmable controller (an engine controller 12, fig. 2) adapted to receive and store firmware (a firmware rewriting program for the apparatus and recording medium storing the program, page 2, paragraph [0018]) that is selected in response to a functional mode request (wherein it is possible to switch between a print mode and a rewrite mode, page 2, paragraph [0018]), and the controller being further operable to execute the stored firmware and to develop the control signals to control the peripheral

circuitry in response to the executing firmware (i.e., the print mode being for forming an image corresponding to the signal based on the firmware stored in the first memory; see page 2, paragraph [0018]).

Regarding claim 2, Sugita '548 discloses the peripheral device (a control unit 1, fig. 2) wherein the programmable controller (an engine controller 12, fig. 2) is further operable to develop the functional mode request in response to selection inputs applied to the peripheral device (i.e., in the operation panel 13, there are a plurality of switches 131 for a user to provide various types of instructions to the CPU 112; see page 4, paragraph [0048], fig. 2).

Regarding claim 3, Sugita '548 discloses the peripheral device (a control unit 1, fig. 2) wherein the peripheral circuitry comprises mechanical components (i.e., the engine EG forms an image corresponding to the image signal on a sheet S such as a copy paper, a transfer paper, other general paper, a transparent sheet for an overhead projector, etc; see page 3, paragraph [0037], fig. 2).

Regarding claim 4, Sugita '548 discloses the peripheral device (a control unit 1, fig. 2) wherein the functional mode request is generated external to the programmable controller (i.e., the main controller and the engine controller being connected for mutual communications with each other, wherein it is possible to switch between a print mode and a rewrite mode; see page 2, paragraph [0018]).

Regarding claim 5, Sugita '548 discloses the peripheral device wherein the peripheral device (a control unit 1, fig. 2) comprises a printer (an image forming apparatus, page 2, paragraph [0015], fig. 1) and wherein the peripheral circuitry comprises a print engine (Engine EG, fig. 2).

Regarding claim 6, Sugita '548 discloses the peripheral device (a control unit 1, fig. 2) wherein the peripheral circuitry further comprises a scanning subsystem (a built-in scanner, page 1, paragraph [0004]), copier subsystem, and a facsimile subsystem (i.e., known as an image forming apparatus such as a printer, a copier machine and a facsimile machine; see page 1, paragraph [0004]).

Regarding claim 7, Sugita '548 discloses the peripheral device (a control unit 1, fig. 2) wherein the programmable controller is further operable to perform an integrity check of the firmware prior to executing the firmware (page 12, paragraph [0150] and [0151], fig. 10).

Regarding claim 8, Sugita '548 discloses the peripheral device (a control unit 1, fig. 2) wherein the functional mode request is associated with a function of the device and the function of the device is associated with the stored firmware (i.e., to request for transmission of a footer of the new firmware 103, the printer 200 sends a "data request" status to the host computer 300. The host computer 300, receiving the "data request" status, sends the footer of the new firmware 103 to the printer 200. The footer thus read

Art Unit: 2625

by the printer 200 is temporarily stored in the RAM 214 as shown in FIG. 7F, and then written in the flash memory 213; see page 8, paragraph [0092]), and wherein the programmable controller is further operable to erase the firmware when the peripheral device has performed the associated function (i.e., the download program thereafter is started up in order to write the firmware 103. First, as shown in FIG. 4C, the old firmware stored in the flash memory 123 is deleted (deleting step). To request for transmission of a header of the new firmware 103, the engine controller 12 sends a "data request" status to the main controller 11. The main controller 11, receiving the "data request" status, sends the header of the new firmware 103 to the engine controller 12; see page 5, paragraph [0063]).

Regarding claim 9, Sugita '548 discloses the peripheral device (a control unit 1, fig. 2) wherein the programmable controller includes a digital signal processor for image processing of print or scanned data (i.e., as the CPU 112 and a logic circuit operate in accordance with the program, the received image signal is processed through various types of image processing; see page 8, paragraph [0099]).

Regarding claim 10, Sugita '548 discloses a computer network (a plurality of host computers 100 connected with the image forming apparatus through a LAN, page 9, paragraph [0106]), comprising:

a peripheral device (a control unit 1, fig. 2), comprising:

peripheral circuitry (a main controller 11/ an engine controller 12, fig. 2) operable to perform a desired function responsive to control signals (i.e., for controlling so that an image which corresponds to a signal fed from the main controller is formed in accordance with the signal; see page 2, paragraph [0018]);

a programmable controller (an engine controller 12, fig. 2) adapted to receive and store firmware (a firmware rewriting program for the apparatus and recording medium storing the program, page 2, paragraph [0018]) that is selected in response to a functional mode request (wherein it is possible to switch between a print mode and a rewrite mode, page 2, paragraph [0018]), and the controller being further operable to execute the stored firmware and to develop the control signals to control the peripheral circuitry in response to the executing firmware (i.e., the print mode being for forming an image corresponding to the signal based on the firmware stored in the first memory; see page 2, paragraph [0018]);

a computer system (100, fig. 2) coupled to the programmable controller (a control unit 1, fig. 2), the computer system including a software component operable to provide the firmware to the controller responsive to the functional mode request (i.e., the host apparatus and the image forming apparatus being connected for mutual communications with each other, wherein it is possible to switch between a print mode and a rewrite mode, the print mode being for forming an image corresponding to the signal based on the firmware stored in the memory; see page 2, paragraph [0020]).

Art Unit: 2625

Regarding claim 11, Sugita '548 discloses the computer network (a plurality of host computers 100 connected with the image forming apparatus through a LAN, page 9, paragraph [0106]) wherein the programmable controller is further operable to develop the functional mode request responsive to selection inputs applied to the peripheral device (i.e., in the operation panel 13, there are a plurality of switches 131 for a user to provide various types of instructions to the CPU 112; see page 4, paragraph [0048], fig. 2).

Regarding claim 12, Sugita '548 discloses the computer network (a plurality of host computers 100 connected with the image forming apparatus through a LAN, page 9, paragraph [0106]) wherein the software component is further operable to develop the functional mode request responsive to selection inputs applied to the computer system (i.e., the apparatus as a whole is controlled as a plurality types of commands are sent from the main controller to the engine controller; and when a rewrite mode for rewriting firmware is selected, the number of the types of usable commands is reduced; see page 2, paragraph [0019]).

Regarding claim 18, Sugita '548 discloses the computer network (a plurality of host computers 100 connected with the image forming apparatus through a LAN, page 9, paragraph [0106]) wherein the peripheral device comprises a printer (print engine EG, fig. 2).

Art Unit: 2625

Regarding claim 19, Sugita '548 discloses a method of operating a peripheral in a computer system including a host computer (100, fig. 2), the peripheral device being operable in a plurality of functional modes (i.e., the main controller and the engine controller being connected for mutual communications with each other, wherein it is possible to switch between a print mode and a rewrite mode; see page 2, paragraph [0018]) and the method comprising:

selecting a functional mode of the peripheral device (a controller which executes a print mode or a rewrite mode selectively, page 3, paragraph [0022]);

in response to the selection of the functional mode, transferring firmware to the device, the firmware corresponding to the selected functional mode (i.e., in the print mode for forming an image corresponding to an image signal received from the main controller 11 based on the firmware which is stored in the flash memory 123; see page 5, paragraph [0052]);

storing the firmware in the peripheral device (the flash memory 123 is used as a "rewritable memory which stores firmware", page 5, paragraph [0051]);

executing the firmware in the peripheral device to operate the peripheral device in the selected functional mode (i.e., the engine controller 12 is also capable of executing the rewrite mode which is for rewriting the firmware; see page 5, paragraph [0053]).

Regarding claim 20, Sugita '548 discloses the method wherein selecting a functional mode of the peripheral device comprises selecting in the host computer the

Art Unit: 2625

functional mode of the device (i.e., when the printer driver is started up, the display of the host computer 100 shows a button for selecting writing of the firmware. As a user, service engineer or the like selects this button, a procedure of necessary processing to write the firmware appears on the display; see page 5, paragraph [0056]).

Regarding claim 21, Sugita '548 discloses the method wherein selecting a functional mode of the peripheral device comprises applying selection inputs to the peripheral device to select the functional mode (i.e., in the operation panel 13, there are a plurality of switches 131 for a user to provide various types of instructions to the CPU 112; see page 4, paragraph [0048], fig. 2).

Regarding claim 22, Sugita '548 discloses the method wherein the peripheral device comprises a printer (print engine EG, fig. 2).

Regarding claim 23, Sugita '548 discloses the method wherein the selected mode corresponds to one of a print, scan (a built-in scanner, page 1, paragraph [0004]), copy, and fax mode of operation of the peripheral device (i.e., applicable to any image forming apparatus, such as a copier machine and a facsimile machine; see page 6, paragraph [0070]).

Regarding claim 24, Sugita '548 discloses the method wherein executing the firmware in the peripheral device to operate the device in the selected mode comprises

Art Unit: 2625

executing the image processing firmware in a digital signal processor contained in the device (i.e., as the CPU 112 and a logic circuit operate in accordance with the program, the received image signal is processed through various types of image processing; see page 8, paragraph [0099]).

Regarding claim 25, Sugita '548 discloses the method further comprising performing image processing with parallel digital signal processors (i.e., applicable to any image forming apparatus, such as a copier machine and a facsimile machine, which forms an image using two controllers which are connected for mutual communications with each other; see page 6, paragraph [0070], fig. 2, CPU 112, CPU 122).

#### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 13-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sugita (US 2004/0068548) in view of Zimmerman (US 7,268,900).

Regarding claim 13, Sugita '548 does not disclose the computer network wherein the software component is further operable to determine whether an updated version of the firmware corresponding to the functional mode request is available, and if an

updated version is available to transfer the updated version to the programmable controller.

However, the above-mentioned claimed limitations are well known in the art as evidenced by Zimmerman. In particular, Zimmerman teaches the computer network (a computer system 100, fig. 2) wherein the software component is further operable to determine whether an updated version of the firmware corresponding to the functional mode request is available (step 734, fig. 7), and if an updated version is available to transfer the updated version to the programmable controller (step 748, fig. 7).

In view of the above, having the system of Sugita and then given the well-established teaching of Zimmerman, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to modify the system of Sugita as taught by Zimmerman to include: the computer network wherein the software component is further operable to determine whether an updated version of the firmware corresponding to the functional mode request is available, and if an updated version is available to transfer the updated version to the programmable controller, since such a modification would ensure there is an increased need for means to maintain those systems in both operationally stable and state-of-the art condition. Moreover, computer network products must be reliable and easily upgradable to match improvements in host computers and network servers.

Regarding claim 14, Sugita '548 does not disclose the computer network wherein the software component is further operable to access a Web site to determine whether

an updated version of the firmware is available and to download the updated version to the computer system when available.

However, the above-mentioned claimed limitations are well known in the art as evidenced by Zimmerman. In particular, Zimmerman teaches the computer network wherein the software component is further operable to access a Web site (step 804, fig. 8) to determine whether an updated version of the firmware is available and to download the updated version to the computer system when available (step 834, fig. 8).

Regarding claim 15, Sugita '548 does not disclose the computer network wherein the software component determines that an updated version of the firmware is available by communicating with a Web site to receive an updated version indicator from the Web site and to compare this updated version indicator to a version indicator stored on the computer system, and is further operable to download to the computer system an updated version of the firmware when available.

However, the above-mentioned claimed limitations are well known in the art as evidenced by Zimmerman. In particular, Zimmerman teaches the computer network wherein the software component determines that an updated version of the firmware is available by communicating with a Web site to receive an updated version indicator from the Web site and to compare this updated version indicator to a version indicator stored on the computer system (step 868, fig. 8), and is further operable to download to the computer system an updated version of the firmware when available (step 878, fig. 8).

Art Unit: 2625

Regarding claim 16, Sugita '548 does not disclose the computer network wherein the software component is further operable to compare a controller version indicator stored in the controller or on the computer system with a controller version indicator received from the Web site along with the updated firmware, and is operable to download the updated version of the firmware only if controller version indicators indicate the updated firmware is compatible with the controller in the peripheral device.

However, the above-mentioned claimed limitations are well known in the art as evidenced by Zimmerman. In particular, Zimmerman teaches the computer network wherein the software component is further operable to compare a controller version indicator stored in the controller or on the computer system with a controller version indicator received from the Web site along with the updated firmware (step 818, fig. 8), and is operable to download the updated version of the firmware only if controller version indicators indicate the updated firmware is compatible with the controller in the peripheral device (step 834, fig. 8).

Regarding claim 17, Sugita '548 does not disclose the computer network wherein the software component is further operable to communicate with the Web site to determine whether an updated version of the software executed by the software component is available, and to download an updated version of this software when available.

However, the above-mentioned claimed limitations are well known in the art as evidenced by Zimmerman. In particular, Zimmerman teaches the computer network

Art Unit: 2625

wherein the software component is further operable to communicate with the Web site to determine whether an updated version of the software executed by the software component is available (step 808, fig. 8), and to download an updated version of this software when available (step 818, fig. 8).

### ***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Suyehira (US 2002/0170049) discloses always-latest program code.

Parry et al. (US 7,043,166) discloses method and systems for providing firmware to a printing device.

Smith et al. (US 7,158,248) discloses control of software via bundling.

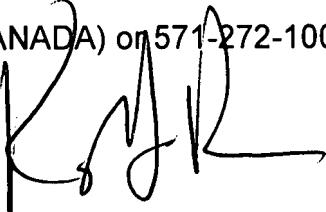
8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Allen H. Nguyen whose telephone number is 571-270-1229. The examiner can normally be reached on M-F from 9:00 AM-6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, King Poon can be reached on (571)-272-7440. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AN

10/18/2007



KING Y. POON  
SUPERVISORY PATENT EXAMINER